

FURMAN, A.O.; KOBAZEV, Ye.I.

Using the "TISS" radiometer for recording soft Beta radiation.
Izv. TSKhA no.2:232-233 '61. (MIRA 14:8)
(Beta rays) (Radiometer)

L 19347-63

EWI(m)/BDS AFFTC/ASD

ACCESSION NR: AR3005190

S/0272/63/000/007/0164/0164/

SOURCE: RZh. Metrologiya i izmer. tekhnika. Otd. vy*p., Abs. 7.32.1110

56

AUTHOR: Furman, A. O.

TITLE: Setup for measuring low-activity preparations according to hard beta-radiation, halogen counter, STS-5

CITED SOURCE: Izv. Timiryazevsk. s.-kh. akad., no. 5, 1962, 195-202

TOPIC TAGS: low-activity radiation measurement, hard beta-ray emission, radiation measurement

TRANSLATION: A setup is described for the measurement of radioactive preparations with weak emission according to the hard β -radiation. The radiation detector is an STS-5 halogen counter (length of plateau 200 volts, slope -- 2.1% per 100 volts). The counters (working counter and 18 protective counters) are enclosed in a horizontal lead housing of the MIZ type with a wall thickness of up to 50 mm. The setup uses an anticoincidence circuit with three 6N1P tubes enclosed in the BGS block and powered from a stabilized source mounted in the

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PS-64 block of the B-type apparatus. The circuit is easily adjustable and reliable in operation. A table is included which compares the minimum activity levels with the B-type setup with and without the anticoincidence circuit. The setup makes it possible to measure $\text{Sr}^{90} + \text{Y}^{90}$ preparations with an activity of $A = 1 \cdot 10^{-12}$ curie with an accuracy of $\delta = 40\%$ over a time $t = 2$ hours.

DATE ACQ: 24Jul63

SUB CODE: GE, NS

ENCL: 00

Card 2/2

GARNETSKIY, V.A., aspirant; KOBAZEV, Ye.I., starshiy laborant; RACHINSKIY, V.V., doktor khimicheskikh nauk, prof.; FURMAN, A.O., starshiy prepodavatel'

Variant of the automatic apparatus for recording the elution and column curves of the distribution of tagged elements in chromatographic analysis. Izv. TSKHA no.4:224-229 '63.

(MIRA 17:1)

FURMAN, A. S.

FURMAN, A. S. AND SHRAYBER, L. B. "Materials for the clinical treatment of acute hepatitis", Trudy Kishinevsk. gos. med. in-ta, Vol. 1, 1949, p. 322. 30.

SO: U3261 , 10 April 53 (Letopis - Zhurnal 'nykh Statey No. 11, 1949).

FURMAN A. S.

O pokazaniia h i protivopokazaniakh k napravleniiu tuberkuleznykh bol'nykh na iuzhnyi bereg Kryma. [Indications and contra-indications for directing tuberculous patients to southern Crimea.] Sovet. med. No. 6 June 51 p. 16-7.

1. Professor, Head of the Department of Tuberculosis of the Central Institute for the Advanced Training of Tuberculosis Physicians at Yalta (Director--V. P. Lebedeva) attached to the Institute of Climatotherapy (Director--V. F. Chernyshev). CLML Vol. 20, No. 10 Oct 1951

FURMAN, A.S.

Classification of pulmonary tuberculosis. Probl. tuberk., Moskva no. 1:
35-38 Jan-Feb 52. (CIML 21:5)

1. Professor. 2. Head of the Department of Tuberculosis at Yalta of
the Central Institute for the Advanced Training of Physicians (Director
V.P. Lebedeva).

FURMAN, A.S.

Therapeutic indications in pulmonary tuberculosis in
sanatoria on the southern shores of Crimea. Probl.
tuberk., Moskva No.5:61-67 Sept-Oct. 1953. (OIML 25:5)

1. Professor. Head of the Tuberculosis Department of the
Central Institute for the Advanced Training of Physicians
(Director -- V.P. Lebedeva) located at the Institute of
Tuberculosis Climatotherapy (Director -- Ye. D. Petrov)
at Yalta.

FURMAN, A.S.

[Artificial pneumothorax] Lechebnyy pnevmotoraks. Izd. 4-oe, ispr.
i dop. Moskva, Medgiz, 1956. 208 p. (MLRA 9:11)
(PNEUTOTHORAX)

FURMAN, A.S., doktor med.nauk., prof.

Review of A.S.Frank's monograph "Syndrome of coronary insufficiency
in different pathological states" by A.S.Furman. Zdravookhranenie
5 no.5:59-64, S-O '62. (MIRA 16:7)

(CORONARY VESSELS--DISEASES)

(BIBLIOGRAPHY--ARTERIES--DISEASES) (FRANK, A.S.)

FURMAN, Aleksandr Samuilovich; BARENBOYM, A.M., red.; CHUCHUPAK,
V.D., tekhn. red.

[Pulmonary tuberculosis] Legochnyi tuberkulez. Kiev, Gos-
medizdat USSR, 1963. 253 p. (MIRA 17:3)

IVANOV, V.V.; FURMAN, A.V.

Temperature field of an infinite anisotropic prism with internal
heat generation. Inzh.-fiz. zhur. 8 no.3:358-360 Mr '65.

(MIRA 18:5)

1. Politekhnicheskiy institut, Tomsk.

L 8988-66

ENT(d)/ENT(1)/EPP(n)-2/ENA(1)

LP(c)

WW

ACC NR: AP5027572

UR/0170/65/009/005/0594/0596

81

AUTHOR: ^{14.55}Ivanov, V.V.; Furman, A.V.

B

ORG: ^{44.55}Electrotechnical Institute, Novosibirsk (Elektrotekhnicheskiy institut)

TITLE: An approximate solution of the problem of nonlinear heat conductivity

SOURCE: Inzhenerno-fizicheskiy zhurnal, v.9, no.5, 1965, 594-596

TOPIC TAGS: ^{21, 44.55}heat conductivity, heat transfer, heat capacity, ^{76, 44, 55}non-linear differential equation

ABSTRACT: The article considers unsteady state heat transfer in solid bodies when the thermophysical properties are functions of the temperature. The problem reduces to the solution of the nonlinear differential equation of heat conductivity

$$\rho(T)C(T)\frac{\partial T}{\partial \tau} = \text{div}[\lambda(T)\text{grad } T] \quad (1)$$

with appropriate initial and boundary conditions. For most materials the density is a constant, but the relationships between the coefficients of heat conductivity and heat capacity and the temperature are

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UDC: 536.21

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ACC NR: AP5027572

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nonlinear functions:

$$\lambda(T) = \lambda_0 + nT, \quad (2)$$

$$C(T) = C_0 + mT. \quad (3)$$

In a given interval or, if this interval is sufficiently large, in sections of it, relationships (2) and (3) can be replaced by exponential functions:

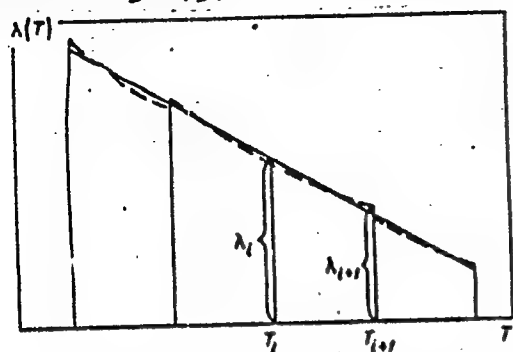
$$\lambda(T) = \lambda_0 + nT = \lambda_i \exp\left(\frac{T - T_i}{T_{i+1} - T_i} \ln \frac{\lambda_{i+1}}{\lambda_i}\right), \quad (4)$$

$$C(T) = C_0 + mT = C_i \exp\left(\frac{T - T_i}{T_{i+1} - T_i} \ln \frac{C_{i+1}}{C_i}\right). \quad (5)$$

Here λ_1 , λ_{i+1} and C_1 , C_{i+1} are the approximate values of the heat conductivity and heat capacity coefficients at the limits of a chosen temperature interval $\Delta T = T_{i+1} - T_1$ (See Figure).

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ACC NR: AP5027572



Approximation of the heat conductivity coefficient (T) by exponential curves

solid line--true curve;
dotted line--approximate curve

The values of the variables are chosen on the assumption that the areas under the true and approximate curves are equal. The article presents an example involving the numerical calculation of the cooling of a cube with an edge 0.4 meters long. Orig. art. has: 10 formulas, 1 figure.

SUB CODE: GO,TD/ SUBM DATE: 07Dec64/ ORIG REF: 002

OTH REF: 000

Card

3/3

L 05899-67 EWT(d)/EWT(1) IJP(c) NN

ACC NR: AP6008134

SOURCE CODE: UR/0281/66/000/001/0131/0134

AUTHOR: Ivanov, V. V. (Novosibirsk); Furman, A. V. (Tomsk)

ORG: None

TITLE: Investigation of ²heating of solids by convective and radiant fluxes

SOURCE: AN SSSR. Izvestiya. Energetika i transport, no. 1, 1966, 131-134

TOPIC TAGS: dimension analysis, radiative heat transfer, convective heat transfer, heat theory

ABSTRACT: A simple approximate method is proposed for calculating the ²temperature field in bodies heated by simultaneous convection and radiation where the physical properties of the body (thermal conductivity and specific heat) vary together with temperature. A partial differential equation is given in dimensionless form for specific heat as a function of temperature in terms of the temperature dependence of thermal conductivity and the boundary conditions for this problem are formulated. A procedure for simplification and approximate solution of this system of equations is given. Numerical calculations assuming constant thermophysical parameters showed that when the

Stark number $Sk = \frac{\sigma_0 T_0^4}{\lambda_0} R$ is small and the dimensionless temperature θ_0 is high, it may be assumed that

$$\frac{n}{N} p = 4 \left(\frac{\theta_0 + 1}{2} \right)^2 + \frac{Bi}{Sk}$$

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UDC: 536.12:536.25:536.3

ACC NR: AP6008134

where $Bi = aR/\lambda_0$ is the Biot number and p is a positive real number. For low θ_0 and large Sk , the region for the variation in θ should be divided into k intervals: $\theta_0, \theta_1, \dots, \theta_{k-1} - \theta_k, \dots, \theta_{k-1} - 1$ and p should be chosen for each interval from the relationships

$$\frac{n}{N} p_k = 4\theta_k^2 + \frac{Bi}{Sk}, \quad \frac{n}{N} p_k = 4 \left(\frac{\theta_{k-1} + 1}{2} \right)^2 + \frac{Bi}{Sk}.$$

The error in calculation of the temperature field for all generalized dimensionless coordinates $X=x/R$ is less than 5% with proper selection of the parameter p . A table is given comparing temperatures in an infinite plate calculated by various methods. Orig. art. has: 1 table, 19 formulas.

SUB CODE: 20/ SUBM DATE: 03Jun65/ ORIG REF: 004

kh

Card 2/2

FURMAN, Aleksey Yevgeniyevich; DOBROKHVALOV, V.P., kandidat biologicheskikh nauk, redaktor; KNYAZEVA, L., redaktor; TROYANOVSKAYA, N., tékhnikheskiy redaktor.

[Michurin's theories on the natural development of the organic world] Michurinskoe uchenie o zakonovernostiakh razvitiia organicheskogo mira. Moskva, Sov.isd-vo polit.lit-ry, 1957. 225 p.
(MLBA 10:6)

(Biology)

FURMAN A. Ye.

USSR / General Division, General Questions, Philosophy, A-1
Methodology

Abs Jour: Ref Zhur-Biologiya, No 5, 1958, 18806

Author : Furman A. E

Inst : —

Title : The Philosophical Seminars in the Soil-Biology Faculty
of the Moscow State University

Orig Pub: Vopr. filosofii, 1957, No 3, 215-216

Abstract: In 1949 philosophical seminars of the professors
and teachers of the Soil-Biology Faculty of the Mos-
cow State University began to work. Actual philo-
sophical questions of biology were discussed at them:
species and species formation; on the laws of develop-
ment of the organic world, the problem of the complete-
ness of an organism, and others.

Card 1/1

APPROVED FOR RELEASE: 03/13/2001. CIA-RDP86-00513R000513910014-7
A.Ye.; FILIPPOV, L.A., red.; YERMAKOV, M.S., tekhn. red.

[Philosophical problems in natural history] Filosofskie voprosy
estestvoznaniia. [Moskva] Izd-vo Mosk. univ. Vol.1. [Philosophical
and theoretical problems in Michurin's theories] Filosofsko-
teoreticheskie voprosy michurinskogo ucheniia. 1958. 421 p.
(Michurin, Ivan Vladimirovich, 1855-1935) (NIRA 11:10)
(Biology--Philosophy)

KAGANOV, V.M.; FURMAN, A.Ye.; IGNATOV, A.I.; PLYUSHCH, L.N.; SHOROKHOVA, Ye.V.; YUROVAYA, I.L.; PLATONOV, G.V., red.; SUKHOV, A.D., red.izd-vs; RYLINA, Yu.V., tekhn.red.; LAUT, V.G., tekhn.red.

[The problem of causality in modern biology] Problema prichin-
nosti v sovremennoi biologii. Moskva, 1961. 191 p.

(MIRA 14:2)

1. Akademiya nauk SSSR. Institut filosofii.
(CAUSATION) (BIOLOGY-~~PHILOSOPHY~~)

FURMAN, Aleksey Yevgen'yevich; FEYGINSON, N.I., otv. red.; POMALEN'KAYA,
O.T., red.; YERMAKOV, M.S., tekhn. red.

[Origin and formation of the dialectic conception of development in
biology] Vozniknovenie i formirovanie dialekticheskoi kontseptsii
razvitiia v biologii. Moskva, Izd-vo Mosk. univ., 1961. 282 p.
(MIRA 14:8)

(Biology—Philosophy)

OPARIN, A.I., akademik; STUDITSKIY, A.N., prof.; NAUMOV, N.P.,
prof.; KOVAL'SKIY, V.V.; YUKOVA, I.L., dots.; PLATONOV, G.V.,
prof.; KAGANOV, V.M.; FURMAN, A.Ye., dots.; MEDVEDEV,
N.V., prof.; YAKIMOV, V.P., kand. biol. nauk;
ZHUKOV-VEREZHIKOV, N.N.; BONDARENKO, P.P., prof.;
MAYSKIY, I.N., prof.; TRIBULEV, G.P., dots.;
TSAREGORODTSEV, G.I., dots.; DOBROKHVALOV, V.P., kand.
biol. nauk; YAZDOVSKIY, V.I., prof.; VIKTOROVA, V., red.;
CHEREMNYKH, I., mlad. red.; ULANOVA, L., tekhn.red.

[Studies on the dialectic of living nature] Ocherk dia-
lektiki zhivoi prirody. Moskva, Sotsekgiz, 1963. 527 p.
(MIRA 16:12)

1. Chlen-korrespondent Vsesoyuznoy akademii sel'skokho-
zyaystvennykh nauk imeni V.I.Lenina (for Koval'skiy).
2. Deystvitel'nyy chlen AMN SSSR (for Zhukov-Verezhnikov).
(Biology--Philosophy)

FURMAN, ALEKSEY YEVGEN'YEVICH

Vozniknoveniye i formirovaniye dialekticheskoy ontseptsii razitiya v
Biologii. Moskva, Izd-vo Moskovskogo Universiteta, 1961.

282 p .

Includes Bibliographical References.

FURMAN, B.A.

Increase the recording density and readout quality of a
magnetic tape in program controlled machine tools. Avtom.
1 prib. no.1:30-32 Ja-Mr '65. (MIRA 18:8)

FURMAN, Coloman

How we Rumanians are carrying out our duties in the field of labor safety. Munca sindic 7 no.10:46-49 0 '63.

1. Membru al comitetului sindicatului, responsabilul comisiei de protectie a muncii si legislatie, uzinele "Victoria", Calan.

FURMAN, D., elektrosvershchik.

Economical methods of installation welding. Stroitel' no.3:12
Ag '57. (MIRA 10:9)
(Electric welding) (Reinforced concrete)

FURMAN, David Borisovich; PROKOPOVICH, A.Ye., red.; ALEKSEYEVA, T.V.,
tskhm.Red.

[Modernization of metal-cutting machine tools] Modernizatsiia
metallorazhushchikh stankov. Moskva, TSentr. biuro tekhn. informa-
tsii, 1958. 45 p. (Modernizatsiia metallorazhushchikh stankov,
no.3).

(Machine tools)

(MIRA 12:10)

FURMAN, D.B.

Modernization of the AIA type horizontal drilling machine made
by the Beringer Company. Mod.metallorozn.stan. no.8:3-12. '59.
(MIRA 13:5)

(Drilling and boring machinery--Technological innovations)

FURMAN, D.B. ;

Modernization of planing machines made by the Waldrich Company.
Mod.metallorazh.stan. no.12:3-16 '59. (MIRA 13:5)
(Planing machines--Technological innovations)

FURMAN, D.B.

Modernization of the ZF-1 type gear-milling machine. Mod.
metalloresh.stan. no.13:3-8 '59. (MIRA 13:5)
(Gear-cutting machines)

FURMAN, D.B.

Mechanical brakes for the 1616 screw-cutting lathe. Mod.
metallorezh. stan. no.16:24-26 '60. (MIRA 14:7)
(Screw-cutting machines—Technological innovations)

AYZENSHTADT, L.A.; PEN'KOV, P.M.; GLADKOV, B.A.; LIKHT, L.O.;
KRIMMER, T.Ye.; KASHEPAV, M.Ya., kand. tekhn. nauk;
MERPERT, M.P., kand. tekhn. nauk; KOPERBAKH, B.L.;
CHERNIKOV, S.S., kand. tekhn.nauk; BELOV, V.S.; ZHURIN,
B.F.; MONAKHOV, G.A., kand.tekhn.nauk; MOROZOV, I.I.;
MUSHTAYEV, A.F.; OGNEV, N.N.; PALEY, M.B., kand. tekhn.
nauk; FURMAN, D.B.; LIVSHITS, A.L., kand.tekhn.nauk; MECHETNER,
B.Kh.; SOSENKO, A.B.; AVDULOV, A.N.; LEVIN, A.A., kard.tekhn.
nauk; YAKOBSON, M.O., doktor tekhn.nauk; MAYOROVA, E.A.,
kand.tekhn.nauk; MOROZOVA, Ye.M.; ZUSMAN, V.G., kand.tekhn.
nauk; NAYDIS, V.A., kand.tekhn.nauk; VLADZIYEVSKIY, A.P., prof.,
doktor tekhn. nauk, red.; BELOGUR-YASNOVSKAYA, R.I., red.;
CHIGAREVA, E.I., red.; ASVAL'DOV, M.Ya., red.; KOGAN, F.L.,
tekhn. red.

[Machine-tool industry in capitalist countries] Stanko-
stroenie v kapitalisticheskikh stranakh. Pod red. i s pre-
disl. A.P.Vladzievskogo. Moskva, 1962. 822 p. (MIRA 15:7)

1. Moscow. Tsentral'nyy institut nauchno-tekhnicheskoy in-
formatsii mashinostroyeniya. 2. Eksperimental'nyy nauchno-
issledovatel'skiy institut metallorezhushchikh stankov
(for Vladziyevskiy, Belogur-Yasnovskaya, Chigareva, Asval'dov,
Kogan).

(Machine-tool industry)

ONOPRIYENKO, V.F., kand.tekhn.nauk; LEBEDEV, A.Ye., kand.tekhn.nauk;
SOLDATKIN, A.I., kand.tekhn.nauk; LOZOVY, P.R., inzh.; PETRUHLIN,
B.A., inzh.; ARBUZOV, V.A., inzh.; Prinimali uchastiye: FURMAN,
D.M., KONOPLYA, M.V.; KOTOV, A.I.

Pilot-plant production of sinter with a basicity of 1.2 from
Kerch ore concentrates. Biul. TSIICHM no.10:17-22 '60.

(MIRA 15:4)

1. Ukrainskiy institut metallov (for Furman, Konoplya). 2. Kamyshbu-
runskiy kombinat (for Kotov).

(Sintering) (Kerch Peninsula--Iron ores)

CRACIUN, Remus; VASILE, Lazar; GLIGOR, Radu; FURMAN, EVA

Construction sites of the Nr. 5 Brasov Trust. Constr Buc 14
no. 674: 3 8 December 1962.

FURMAN, Eva, correspondent

Effort of the collective has given results. Constr Buc
14 no. 675: 2 15 December 1962.

FURMAN, Eva

At the Oradea lot, Turda construction site, of the Trust
of Construction No.5. Constr Buc 15 no.700:3 8 Je '63.

FURMAN, Eva

Zootechnical complex in construction at Turda. Constr Buc 16 no.771:
1 17 0 '64.

1. The Turda Branch of the Voluntary Editorial Office of
"Constructorul."

RODIONOV, V.P.; FURMAN, E.A., inzh., retsenzents; SHISHLYKOV, Ye.S.,
inzh., red.; VASIL'YEVA, N.N., tekhn. red.

[Check rooms for hand baggage] Kamory khraneniia ruchnoi
kladi. Moskva, Transzheldorizdat, 1963. 65 p.

(MIRA 16:10)

(Railroads—Baggage)

ACC NR: AP6034621

SOURCE CODE: UR/0380/66/000/006/0066/0072

AUTHOR: Gel'man, A. S. (Moscow); Prokof'yev, V. N. (Moscow); Furman, F. A. (Moscow)

ORG: none

TITLE: Wave processes in hydraulic couplings of hydraulic transmissions

SOURCE: Mashinovedeniye, no. 6, 1966, 66-72

TOPIC TAGS: vibration propagation, sound propagation, vibration transmission, fluid flow, flow analysis, *HYDRAULIC ENGINEERING*

ABSTRACT: The propagation of a sound wave in a hydraulic pressure line consisting of a system of two pipes and two vessels filled with an elastic fluid is investigated, and the influence of the vessels on the propagation mechanism of the sound wave is determined. From a fluid's differential equations of motion and continuity, considering its initial and sectional boundary conditions, and applying Fourier and graphic computation methods, an equation is derived which permits the pressure and the flow velocity at any point in the system to be determined. As demonstrated by a numerical example, a sudden inflow-pressure change effects in the next vessel a harmonic pressure change of an amplitude equal to the pressure jump and of a lag equal to the pressure wave's propagation time to the vessel. The pressure fluctuation frequency is influenced by the presence of the second vessel, and the natural fluctua-

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UDC: 532.542

ACC NR: AP6034621

tion period of the first vessel, considering it as a resonator, decreases by the effect of the second vessel proportionally to a given factor. Orig. art. has: 4 figures and 12 formulas. [WA-98]

SUB CODE: 13, 20/ SUBM DATE: 19May65/ ORIG REF: 004/ OTH REF: 002/

Card 2/2

FURMAN, I. I.

PA 34/49T78

USSR/Medicine - Dentistry, Education Jul/Aug/Sep 48
Medicine - Education, Medical

"New Statute for Schools for Extern Dental Technicians," I. I. Furman, 2 pp

"Stomatologiya" No 3

On 1 Jan 47 there were 3,780 dental technicians in the USSR, 78% of whom had been through the dental technical school. Describes training, and explains new regulations concerning externs.

34/49T78

PARIKOZHKA, I.A.; PUGACH, A.B.. Prinimali uchastiye: PASHCHENKO, Z.S.;
FURMAN, I.I.; TRUSKALOV, N.P.; SHEVCHENKO, A.Ye.; SAKHAROVA,
T.M.; TROKHINA, Zh.G.; LEVINOV, K.G.; YAKOVICH, A.Ye.. SALITAN,
L.S.. red.; SHEFER, G.I., tekhn.red.

[Manual on electric measurements of long-distance communication
lines] Rukovodstvo po elektricheskim izmereniyam mezhdugorodnykh
liniy svyazi. Moskva, Gos.isd-vo lit-ry po voprosam svyazi i
radio, 1960. 194 p.
(MIRA 13:6)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye mezhdugorodnoy
telefonno-telegrafnoy svyazi. 2. Kiyevskoye otdeleniye TSentral'-
nogo nauchno-issledovatel'skogo instituta svyazi (for Parikozhka,
Pugach, Pashchenko, Furman, Truskalov, Shevchenko, Sakharova,
Trokhina). 3. TSentral'nyy nauchno-issledovatel'skiy institut
svyazi (for Levinov, Shvartaman). 4. UMMKS (for Yakovich).
(Telecommunication) (Electric measurements)

FURMAN, I.Va., dotsent (Voronezh); TUMIEL', V.S., inzh.(Voronezh); FURMAN, A.M.,
inzh. (Voronezh)

Increasing the yield of water wells by torpedoing. Gidr. 1 mel. 16 no.1:
53-56 Ja '64. (MIRA 17:2)

Ca

The radioactivity of petroleum and gas bearing rocks
and the importance of this factor in commercial geology
prospecting. I. Ye. Furman and A. S. Kagan. *Azer-
baidzhan'skoe Neftyanoe Khozyaystvo* 1935, No. 1, 28-35.—
Folemical with Smarski (cf. preceding abstract). Sixteen
references. A. A. Buchtinger

8

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

FURMAN, I. Ia.,

Furman, I. Ia., and Kagan, A. S. "Concerning the Methodology of Preliminary Estimation of Oil Accumulations on the Basis of Electrical Coring Data." Groznerskii Neftianik, Gromyi, No. 1/2, 1936, pp. 9-16.

FURMAN, I. Ya.

"Geological Models from Drilling Materials," Gostoptekhizdat, Azerbaydzhan Division, 198 pages, 1948

FURMAN, I. Ya.

①
12208* (Electromagnetic Separator of the Horseshoe Type
for Enriching Tripoli.) Elektromagnitnyi separator podkovo-
obraznogo tipa dlia obogashcheniia trepela. R. Ia. Furman.
Steklo i Keramika, v. 11, no. 3, Mar. 1954, p. 23.
Design; superlatally over drum type. Diagrams.

FURMAN, I. YA.

File The economic effects of the use of natural gas in industry
I. Ya Furman. *Gazovaya Prom.* 1957, No. 3, 21-5. -A.
Discussion of the relative merits and efficiencies of coal, fuel
oil, and natural gas in the Russian economy. H. I. Olin

FURMAN, I.Ya.

Geochemical characteristics of oil-field waters in connection with
the formation of salt in them. Trudy Inst. geol. AN Azerb. SSR 19:
259-277 '58. (MIRA 12:10)

(Oil field brines)

FURMAN, I.Ya.

Methods for the planning and accounting of labor productivity
in the gas industry. Gaz.prom. 4 no.9:13-16 S '59.

(MIRA 12:11)

(Gas industry--Labor productivity)

FURMAN, I.Ya.; LAPINA, L.I.

Effectiveness of the use of natural gas in the cement industry.
(Iz.prom. 5 no.6:35-39 Je '60. (MIRA 13:6)
(Gas, Natural) (Cement industries)

FURMAN, Isaak Yakovlevich; SOLGANIK, G.Ya., vedushchiy red.; TROFIMOV, A.V.,
tekhn. red.

[Economic effectiveness of the use of natural gas as industrial fuel]
Ekonomicheskaya effektivnost' ispol'zovaniya prirodnogo gaza kak pro-
myshlennogo topliva. Moskva, Gos. nauchno-tekhn. izd-vo neft. i
gurno-toplivnoi lit-ry, 1961. 33 p. (MIRA 14:7)
(Gas, Natural)

FURMAN, I.Ya.

Utilization of natural gas as a factor in fuel economy.

Gaz. prom. 6 no.9:38-43 '61.

(MIRA 14:12)

(Gas as fuel)

(Gas, Natural)

FURMAN, I.Ya.

Use of natural gas as a factor contributing to technical progress in
industry. Gaz. prom. 7 no.5:5-9 '62. (MIRA 17:11)

YEROFEEV, N.S.; FURMAN, J. Ya.

Economic indices in the underground storage of gas in water-
bearing reservoirs. Gaz. prom. 7 no.12: 38-43 '62 (MIRA 17:7)

FURMAN, Isaak Yakovlevich; RASTOVA, G.V., ved. red.; STAROSTINA, L.D.,
tekhn. red.

[Economic effectiveness of the use of natural gas in
industry] Ekonomicheskaya effektivnost' ispol'zovaniya pri-
rodnogo gaza v promyshlennosti. Moskva, Gostoptekhizdat,
1963. 163 p. (MIRA 16:7)
(Gas, Natural) (Gas as fuel)

FURMAN, I. Ya.

Calculating the effect of gas-consumption conditions in the
design of gas pipelines. Gaz. prom. 8 no.2:42-43 '63
(MIRA 17:7)

FURMAN, I.Ya.; PECHEYKIN, V.A.

Using mathematical statistics to determine disproportion in gas
consumption. Gas. prom. 9 no.5:30-33 '64. (MIRA 17:6)

GAL'PERIN, V.M.; RYPS, G.S.; FURMAN, I.Ya.

Gas industry in the Soviet Union from 1959 to 1963. Gaz. prom.
9 no.7:1-4 '64. (MIRA 17:8)

KHOZHAINOV, N.P., dotsent; TOCHILIN, M.S., prof.; DMITRIYEVSKIY, V.S., dotsent;
CHERNYSHOV, N.I., dotsent; PETRINA, Z.D., predpodavatel'; LAVRENOVA,
T.V., assistant; RASKATOV, G.I., dotsent; PREOBRAZHENSKAYA, V.N.,
dotsent; SHRAMKOVA, G.V., ~~predpodavatel'~~; ~~FLAKSENKO, F.A., dotsent;~~
FURMAN, I.Ya., dotsent

Savva Gavrilovich Vishniakov, 1 37-1964; obituary. Lit. i pol. iskop.
no.6:179-180 N-D '64. (MIRA 18:3)

CZYŻ, Jerzy, arch; FURMAN, Jan, arch.; JOZEFOWICZ, Jerzy, arch.; SKOPINSKI,
Andrzej, arch.; PANORSKI, Włodzimierz, constr.; SZYMCHYK, Jan, constr.;
BIENIEWSKI, Marek, modelist

Contest for a shopping center. Architektura Pol no.10:379-383 '61.

POLAND

FURMAN, Krystyna, Second Clinic of Internal Diseases (II Klinika Chorob Wewnętrznych), AM [Akademia Medyczna, Medical Academy] im. J. Maroniewskiego in Białystok (Director: Prof. Dr. J. CHLEBOWSKI)

"Treatment with Radioiodine of a Case of Thyroid Crisis and Diabetic Coma."

Warsaw-Krakow, Przegląd Lekarski, Vol 19, Ser II, No 1, 63, pp 12-14

Abstract: [Author's English summary] The author reports a case of thyroidal crisis and diabetic coma in a 56 year old woman. Combined treatment with insulin, cortisone, and radioiodine permitted to overcome these complications. The patient is now well. Of the 14 references, five (5) are Western and nine (9) are Polish.

1/1

FURMAN, Krystyna

APPROVED FOR RELEASE: 03/13/2001
Pol. tyg. lek. 20 no.27:996-999 5 J1 '65.

1. Z II Kliniki Chorob Wewnętrznych AM w Białymstoku (Kierownik: prof. dr. Jakub Chlebowski).

LAZARENKO, Yevgeniy Konstantinovich [Lazarenko, IE.K.], prof.;
SLIVKO, M.M., dotsent, otv.red.; FURMAN, K.P., red.;
MALIYAVKO, A.V., tekhnred.

[Course on mineralogy] Kurs mineralogii. L'viv, Vyd-vo
L'vivs'koho univ. Pt.2. [Description of minerals] Opys
mineraliv. 1959. 654 p. (MIRA 13:9)

1. L'vovskiy gosudarstvennyy universitet im. Ivana Franko
(for Lazarenko).
(Minerals--Classification)

MEL'NIK, Yuriy Mikhaylovich [Mel'nyk, Yu.M.]; GABINET, M.P. [Habinet, M.P.], kand. geol.-mineralog. nauk, otv. red.: FURMAN, L.P., red.; MALYAVKO, A.V., tekhn. red.

[Mineralogy of the weathered surface in Western Volhynia]
Do mineralogii kory vyvitriuvannia Zakhidnoi Volyni. L'viv,
Vyd-vo L'viva'koho univ., 1960. 79 p. (MIRA 14:5)
(Volhynia--Weathering)

SHAFRANOVSKIY, I.I., prof. Prinimali uchastiye: MOKIYEVSKIY, V.A.; STULOV, N.N.; GENDELEV, S.Sh.; PIS'MENNYI, V.A.; BALASHOVA, M.N.; MIKHAYEVA, I.V.; SAL'DAU, E.P.; KALININ, A.I.; DOLIVO-DOBROVOL'SKAYA, G.M. PIOTROVSKIY, G.L., dotsent, otv.red.; FURMAN, K.P., red.; MALYAVKO, A.V., tekhred.

[Lectures on the morphology of mineral crystals] Lektsii po kristal-lomorfologii mineralov. L'vov, Izd-vo L'vovskogo univ., 1960.
161 p. (MIRA 14:1)

1. Kafedra kristallografii Leningradskogo gornogo instituta (for Mokiyevaskiy, Stulov, Gendeleev, Pis'mennyy, Balashova, Mikhayeva, Sal'dau, Kalinin, Dolivo-Dobrovol'skaya).
(Minerals) (Crystals)

GRIGOR'YEV, D.P., prof.; LAZARENKO, Ye.K., prof., otv. red.;
FURMAN, K.P., red.; SARANYUK, T.V., tekhn. red.

[Ontogeny of minerals] Ontogenia mineralov. L'vov, Izd-vo
L'vovskogo univ., 1961. 283 p. (MIRA 15:3)

1. Leningradskiy gornyy institut, Kafedra mineralogii (for
Grigor'yev). 2. Chlen-korrespondent Akademii nauk USSR (for
Lazarenko).

(Minerals)

LAZARENKO, E.K. [Lazarenko, IE.K.], prof.; SLIVKO, M.M., dots., otv. red.;
FURMAN, K.P., red.; MALYAVKO, A.V., tekhn. red.

[Course on mineralogy] Kurs mineralogii. L'viv, Vyd-vo L'vivs'koho
univ. Pt.3. [Mineralogy of rocks and mineral deposits] Mineralogiia
hirs'kykh proid i mineral'nykh rodovys'oh. 1961. 306 p.

(MIRA 14:11)

1. L'vovskiy gosudarstvennyy universitet im. Ivana Franka (for La-
zarenko).

(Mineralogy)

LAZARENKO, Yevgeniy Konstantinovich, prof.; GABINET, Mikhail Petrovich [Habinet, M.P.]; SLIVKO, Yelena Petrovna [Slyvko, O.P.]; FURMAN, K.P., red.; MALYAVKO, A.V., tekhn. red.

[Mineralogy of sedimentary formations of the cis-Carpathian region] Mineralogiia osadochrykh utvoren' Prykarpattia. L'viv, Vyd-vo L'vivs'koho univ., 1962. 481 p. (MIRA 15:10)
(Carpathian Mountain region—Mineralogy)

LAZARENKO, Ye.L., prof.; LAZARENKO, E.A.; BARYSHNIKOV, E.K.;
MALYGINA, O.A.; FURMAN, K.P., red.; SARANYUK, T.V.,
tekhn. red.

[Mineralogy of Transcarpathia] Mineralogiia Zakarpat'ia.
[By] E.K.Lazarenko i dr. L'vov, Izd-vo L'vovskogo univ.,
1963. 614 p. (MIRA 17:3)

LESNYAK, V.F.; KALYUZHNYY, V.A., kand. geol.-miner. nauk, otv. red.;
FURMAN, K.P., red.

[Fundamentals of the analysis of the physicochemical properties of mineral-forming solutions according to inclusions in minerals] Osnovy analiza fiziko-khimicheskikh svoystv mineraloobrazuyushchikh rastvorov po vklucheniyam v mineralakh. L'vov, Izd-vo L'vovskogo univ., 1964. 218 p. (MIRA 18:5)

USSR/Processes and Equipment for Chemical Industries -
Control and Measuring Devices. Automatic Regulation.

K-2

Abs Jour : Ref Zhur - Khimiya, No 2, 1957, 6984

Author : Furman, K.S.

Inst : Scientific Research Institute of Thermal Instruments.

Title : Universal Radioactive Density Meter for Liquids

Orig Pub : Priborostroyeniye, 1956, No 7, 25-27

Abstract : The universal radioactive density meter for liquids (PZkR) which was developed by NIITeplopribor, is based on the phenomenon of absorption of a direct beam of gamma radiation on passage by the latter through a layer of liquid, and is a general purpose, industrial, noncontact instrument for remote control, continuous, determination, recording and regulation of density of any liquid. Instrumental error, for any measurement range, does not exceed $\pm 0.01 \text{ g/cm}^3$. The instrument embodies a compensation

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USSR/Processes and Equipment for Chemical Industries -
Control and Measuring Devices. Automatic Regulation.

K-2

Abs Jour : Ref Zhur - Khimiya, No 2, 1957, 6983

system. The comparison channel has its own radioactive source, metal compensation wedge, radiation receiver and a separate forming unit. Difference signal of the 3 measurement channels is transmitted to a servomotor which moves the compensation wedge. Since the intensity of gamma radiation, that has passed through matter, is proportional to density of matter, displacement of the wedge constitute the measure of change in density of the liquid. The wedge is connected to the pointer of the indicator instrument. When the servomotor moves the wedge it also moves the core of the induction coil which is the reference input element of the telemetering system of the secondary instrument. The electronic unit designed as an indicator panel instrument can be located up to 200 m from the radioactive data unit. The secondary instrument can be situated at a distance of 1 km and more from the data unit.

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USSR/Processes and Equipment for Chemical Industries.
Control and Measuring Devices. Automatic Regulation.

K-2

Abs Jour : Ref Zhur - Khimiya, No 2, 1957, 6984

A hookup diagram of PZhR instrument is shown and formulas
are given for determining the activity of the cobalt source
depending on the required measurement range.

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FURMAN, K.S.

~~Utilizing X rays excited by beta rays in measuring techniques. Pri-~~
berestrenie no.1:15-17 Ja '57. (MLRA 10:4)
(X rays--Industrial applications) (Beta rays)

KOROL'KOV, V.I., inzhener; FURMAN, K.S., inzhener.

Conference on the use of radioisotopes. Priborostroenie no.7:31-32
Jl '57. (MLRA 10:9)
(Moscow--Radioisotopes--Industrial application)

FURMAN, K.S.

119-6-14/16

AUTHOR: Furman, K.S.

TITLE: Scientific-Technical Conference on Methods of Radioactive Control and Regulation of Manufacturing Processes (Nauchno-tehnicheskaya konferentsiya po radioaktivnym metodam kontrolya i regulirovaniya proizvodstvennykh protsessov)

PERIODICAL: Priborostroyeniye, 1957, Nr 12, pp. 29-29 (USSR)

ABSTRACT: This conference took place from September 4, to September 7, 1957 at Riga. It was arranged by the central administration for the use of atomic energy attached to the Council of Ministers of the USSR in collaboration with the AN and the council of political economy of the Latvian SSR, as well as the central administration of the scientific technological society for radio engineering and electric communications imeni Popov. The participants were scientists and technical engineers from Moscow, Riga, Kiyev, Tallin, Gor'kiy and other cities. More than 30 reports and papers were read and discussed. They dealt with theoretical works (papers) in the field of calculation and construction of apparatus, based upon the use of radioactive isotopes, and with the adaption of these apparatus in the different branches of the political economy. The first report was written by Professor N.N.Shumilovskiy,

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Scientific-Technical Conference on Methods of Radioactive
Control and Regulation of Manufacturing Processes

119-6-14/16

doctor of technical sciences and L.V.Mel'tser, candidate of technical sciences (institute for automation and telemechanics AN USSR); it dealt with the basic trends and tendencies in the development of the automation production control by means of nuclear radiation. Great attention was paid to the reports of the Scientific Research Institute for the Construction of Heat-Energetic Apparatus (NII Teplopribor), which dealt with the theoretical principles in the design of radioactive apparatus for the measuring of the level and density of liquids. B.I.Verkhovskiy (Physical Institute AN USSR imeni Lebedev) described a method on the increase of exactness in the measuring of the intensity of radioactive radiation. I.M. Taksar and V.A.Yanushkovskiy (Institute for Physics AN Latvian SSR) reported on the consideration which should be given to the statistic of the control signal at the registration of radiation by means of a radioactive relay. The report of V.K.Latyshev, Yu.S.Pliskin, L.K.Tatochenko and A.K. Felinger (Central Scientific Research Institute for Iron-Mining) dealt with the characterization of the principle of the establishment of a quick-working radioactive ammeter. Other interesting reports were submitted: by the Central Scientific Research Institute for Iron Mining, by the Central

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Scientific-Technical Conference on Methods of Radioactive
Control and Regulation of Manufacturing Processes

119-6-14/16

Laboratory of Automation, by the ALLunion Scientific Research Institute for the Oil Industry and other organizations. The report of the central administration for the use of atomic energy attached to the Council of Ministers of the USSR dealt with the organization of laboratories which are occupied with the use of radiation resources. In a resolution of the conference it was pointed out among other items that the development of the theoretical test work should be considered important, as it makes possible the solution of technical problems in the design of concrete apparatus. The use of typical electron blocks is recommended in the construction of apparatus and the increase of production of new blocks is encouraged. Furthermore, the resolution of the conference proposes to unify and typify the existing apparatus and those in project, above all the apparatus for the measuring of the thickness of sheets, as well as the levels of different milieus. Finally, the wish was expressed to create a special institute for the use of isotopes. These problems should be investigated by the central administration for the use of atomic energy and the AN USSR.

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Card 3/3

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THE UNIVERSITY OF CHICAGO
 DIVISION OF THE PHYSICAL SCIENCES
 DEPARTMENT OF PHYSICS
 530 SOUTH EAST ASIAN AVENUE
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 U.S.A.

Sponsoring Agencies: USSR, Glavnoye upravleniye po ispol'zovaniyu atomoy energii, and Akademiya nauk SSSR.

Editorial Board of *Zet*: V.I. Dikushin, Academician (Resp. Ed.), M.N. Smidlovskiy (Deputy Resp. Ed.), Yu. S. Zaslavskiy (Deputy Resp. Ed.), L. L. Tsvetkova, B.I. Voznovskiy, S.T. Masarov, L.I. Petrenko and N.O. Zaslavinskaya (Secretary).

Ed. of Publishing House: P.M. Belyanin; Tech. Ed.: T.P. Polonova.

PURPOSE: This book is intended for specialists in the field of machine and instrument manufacture who use radioactive isotopes in the study of materials and processes.

CONTENTS: This collection of papers covers a very wide field of the utilization of tracer methods in industrial research and control techniques. The topic of this volume is the use of radioisotopes in machine- and instrument-manufacturing industry. The individual papers discuss the applications of radioisotope techniques in the production of alloys, problems of friction and lubrication of metal parts, engine performance, and defects in metals. Several papers were devoted to the use of radioisotopes in the examination of industrial processes, recording and measuring devices, quality control, flowmeters, gauges, control circuits, radiation counters, etc. These papers suggest contributions to various Soviet Institutes and Laboratories. They were published as Transactions of the All-Union Conference on the Use of Radioisotopes and Stable Isotopes and Radiation in the National Economy and Science, April 4-12, 1957. No personalities are mentioned. References are given at the end of most of the papers.

108
Dobrynina, N. B. Method for Estimating the Degree of Degradation of Polymers

Bulyayev, B.B.; Tu.P., Boroyakly, L.W., Postnov, O.N., Magnitskiy, I.I.
The Study of the Processes of Cast Formation in Sand Molds

119
V. A. Zaitsev (Central'ny nauchno-issledovatel'skiy institut
metallurgii - Central Scientific Research Institute of
Metallurgy, Study of the Mechanism of the Basic Process
in Hot-Roll Slabbing)

Jordan, O.G., and E.S. Furman (Machno-Isledovatel'skiy Insti-
tut Teploenergeticheskoye-priborostroyeniya - Scientific Research
Institute of Heat-Power Instruments). Use of Nuclear Radiation
in the Measurement of Heat-Power Parameters

W. W. Tabor
and W. W. Tabor
Plumbing

Jordan, G.O., E.A. Puzan, and T.O. Meyman (Nauchno-issledovatel'skiy institut teploenergicheskogo priborostroyeniya - Scientific Research Institute for Heat-Power Instrument Making, Equipment for the Automatic Control of Gas Flow by Means of Bet-Radiation)

Pelonik, S. A.; L. V. Melnikova, and M. K. Panyukov (Tsentrallyy
Izdatel'stvo Khimicheskoy Literatury, Moscow, U.S.S.R.) *Chem. Abstr.*
1964, 59, 12292. See also 59:12291.

Regalin, V.G., and A.G. Rudakovskiy (Vsesoyuznyy nauchnyy issledovatel'skiy institut - All-Union Coal Research Institute).
Use of Radioactive Isotopes in the Automation of Excavating and Drilling Machines

Jordan, G.G., and E.S. Purman (Nuchno-Issledovatel'skiy Insti-
tut teploenergicheskogo priborostroyeniya - Scientific Research
Institute for Heat-Power Instrument Making). Measuring the Den-
sity of Liquids With Gamma Radiation

AUTHOR: Furman, K.S.

119-58-5-7/11

TITLE: The Main Problems of Designing Self-Compensating Radioactive
Densimeters for Liquids (Osnovnyye voprosy proyektirovaniya
avtokompensatsionnykh radioaktivnykh plotnomerov zhidkosti)

PERIODICAL: Priborostroyeniye, 1958, Nr 5, pp. 22-24 (USSR)

ABSTRACT: Measuring of density can be carried out in two different ways:
a) The decrease of the intensity of a γ -source which has fully
irradiated the liquid, is measured and from this the density
is computed.
b) The decrease of intensity of a γ -ray scattered on the liquid
to be measured, is measured. The decrease shows the degree of
density.
The first method is dealt with in detail theoretically and two
Soviet devices PZhR-3, PZhR -2 are described which work according
to this principle. The principle of self-compensation consists
in the fact that two bundles of rays pass simultaneously through
the liquid and the compensation element. They are divided by
two measuring devices connected in difference switching. The

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The Main Problems of Designing Self-Compensating
Radioactive Densimeters for Liquids

119-58-5-7/11

signal, which causes balancing, acts upon the compensation element until the amount of the balancing signal does not become smaller than the threshold value of the sensitivity of the measuring device.

In the device PZhR-3 an integral-ionization chamber is used, because it is of great efficiency, has small statistical fluctuation, and its life is unlimited. There are 3 figures and 5 references, 4 of which are Soviet.

AVAILABLE: Library of Congress

1. Densimeters--Design

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S/194/61/000/012/008/097
D209/D303

AUTHOR: Furman, K. S.

TITLE: Problems of the theory and basis of design of auto-compensated radioactive liquid densitometers

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 12, 1961, 27, abstract 12A191 (Radioakt. metody kontrolya i regul. proizv. protsessov, Riga, AN Latv. SSR, 1959, 55-63)

TEXT: Described is a method based on determining the variation of intensity of primary beam of γ -rays after its passage through the substance being measured. The radioactive source and the radiation receiver are so arranged that the primary γ -ray beam, after passing through the substance under measurement, enters the radiation receiver. Analyzed are measuring circuits of the autocompensated liquid densitometer, in which there takes place an automatic compensation of the variations of the γ -ray beam intensity resulting from the change of liquid density at all points of the instrument scale. ✓

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Problems of the theory ...

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D209/D303

The application of metallic (steel or aluminum) wedges is proposed as a compensating element for the γ -rays which permits use of a linear scale for the instrument. Basic equations are given, connecting the characteristics of the radiation source with the instrument parameters, object of measurement and controlled process. 5 references. /-Abstractor's note: Complete translation. /

Card 2/2

21(3), 9(6)
AUTHORS:

SOV/117-59-3-3/15

Iordan, G. G., Candidate of Technical Sciences, Meyman, T. G.,
Engineer, Furman, K. S., Engineer

TITLE: Safety Technique in the Extensive Introduction of Radioactive
Apparatus (O tekhnike bezopasnosti pri shirokom vnedrenii
radioaktivnykh priborov)

PERIODICAL: Priborostroyeniye, 1959, Nr 3, pp 21-22 (USSR)

ABSTRACT: The directives of the XX Congress of the KPSS contained the
following passage: Plans must be established in due time
for a more extensive use of radioactive radiation in in-
dustries, agriculture, and medicine, in particular for the
quality control of materials, for the inspection of production
processes and their automatic control. In recent times such
apparatus have been developed and introduced into industries.
The radioactive level gage UR-4 is widely used in the control
of the level of liquid chlorine in containers in various
production processes. The radioactive level indicator RIU-1
measures the maximum and minimum height of dust in dust
eliminators used in roasting pyrites in the "rimming zone".
The radioactive device PZhR intended for the measurement of
the density of fluids is used in the production of chlorinated

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307/110-59-3-2/15

Safety Technique in the Extensive Introduction of Radioactive Apparatus

oil, electrolytic soda, calcium chloride, etc. Special care must be taken in the use of radioactive apparatus which operates with gamma-radiation, and the same holds for apparatus using high-energy β -radiation. 250 of the 500 large industrial plants in the USA use radioactive isotopes in one or another form. In 1957 the use of radioactive isotopes saved 406 million dollars, and this figure will climb to 5 billion dollars in about 5 years. At present all directions for use of radioactive apparatus include specifications as to their installation and operation. If these specifications are strictly complied with, an irradiation of personnel with prohibitively high doses (that is 0.05 roentgen per working day) is excluded. In practice, however, it appeared that the unclear wording of these specifications renders control and sanitary inspection more difficult. Hence it is necessary to issue specialized sanitary regulations for the application of radioactive apparatus with inherent gamma-sources for technological inspection purposes. According to the opinion of the authors these regulations should be based upon the following considerations: In places where people are working who are not professionally engaged in work with ionizing

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Safety Technique in the Extensive Introduction of Radioactive Apparatus

radiation, the radiation dose originating from technological inspection apparatus should not exceed one tenth of the maximum admissible radiation dose. If this requirement is to be satisfied in practice, it is necessary to keep the dose rate on the surface of such apparatus below 0.2 microroentgen/second. The majority of apparatus which is in use at present do not comply with this standard, and if such "sub-standard" equipment is employed, additional protective measures are required. Subsequently, formulas for safety clearances are derived and applied to special cases. The safety clearances can also be determined with a dosimeter. It appears to be expedient that the manufacturers of radioactive apparatus should send a team of specialists to customers who will look after the installation of the equipment in a suitable place. A report is given on the problems involved in transporting such equipment and on its regular inspection. Finally, the authors express their gratitude to L. N. Balanina, researcher at the Institut gigiyeny truda i profzabolevaniy (Institute of Labor Hygiene and Professional Diseases) for her valuable assistance.

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Safety Technique in the Extensive Introduction of Radioactive Apparatus

There are 3 references, 2 of which are Soviet.

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. 21(4)

SOV/25-59-9-5/49

AUTHOR: Furman, K.S., Senior Scientific Worker

TITLE: Atomic Devices for Automation

PERIODICAL: Nauka i zhizn', 1959, ²⁶Nr 9, p 12 - 16 and p 1 of centerfold (USSR)

ABSTRACT: The author reports on the development and introduction of atomic devices. Presently, in the Soviet Union, several thousand such devices are being used. The application of radioactive isotopes in industry, chiefly in technological control devices, saved the national economy about 1.2 to 1.5 billion rubles in 1957. According to data of the Institut ekonomiki Akademii nauk SSSR (Institute of Economics of the AS USSR), in the next 5-6 years the economic effectiveness of the application of radioactive means of automation and control of production processes will increase more than 8 times (for an annual saving of 500 million rubles in 1958 to 4 billion rubles). Any installation for automatic control using nuclear radiation consists

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. Atomic Devices for Automation

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of 4 elements: radiation source, radiation receiver, electronic block and secondary device. The first two elements are the transmitter of the device. It produces electrical signals depending upon the magnitude of the controlled parameter. In the electronic block, the signals of the transmitting element are produced in such a form that they put into operation the secondary device, with the aid of which the automatic control or the regulation by the process is performed. The selection of isotopes is limited above all by their half-life. The isotopes cobalt-60 and cesium-137 (gamma-emitter), strontium-90 and thallium-204 (beta-emitter) and polonium-210 (alpha-emitter) are mostly used. Radioactive devices are successfully used for checking the density of various liquids used in chemical processes related to the synthesis of new materials in the metallurgical, petroleum, food and other industries. An improved method for measuring gas consumption has been developed based on the following principle: the pipe system through which the gas is supplied, is radiated by a beam of beta-particles. The radiation

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. Atomic Devices for Automation

SOV/25-59-9-5/49

flux is periodically interrupted by a rotating obturator. The beta-rays passing through the wall of the pipe system get into the gaseous medium and form a "little cloud" of ionized gas molecules. Each cloud, passing by the electrodes mounted in the pipe system, induces a charge in them. The moment of charge is fixed by the device and shows the average time needed for the transmission of the cloud from its place formation to the place of registration. This time is also a measure of the velocity of the gas through the pipe system and consequently of the gas consumption. A radioactive density measuring device (Figure 1), a radioactive ionizing manometer (Figure 2), a radioactive consumption measuring device RGT-2 (Figure 3) and a drawing of the automation of a technological process for concentrating various mineral raw materials

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. Atomic Devices for Automation

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(Figure 4) are shown. There are 3 photographs and 1 set of drawings.

ASSOCIATION: Nauchno-issledovatel'skiy institut teploenergeticheskogo priborostroyeniya (Scientific-Research Institute for the Building of Thermo-Power Devices)

Card 4/4

FURMAN, K S.

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PHASE I BOOK EXPLOITATION

80V/5486

Vsesoyuznoye soveshchaniye po vnedreniyu radioaktivnykh izotopov i yadernykh izlucheniya v narodnoye khozyaystvo SSSR. Riga, 1960.

Radioaktivnyye izotopy i yadernyye izlucheniya v narodnom khozyaystve SSSR; trudy soveshchaniya v 4 tomakh. t. 1: Obshchiye voprosy primeneniya izotopov, --ibory s istochnikami radioaktivnykh izlucheniya, radiatsionnaya khimiya, khimicheskaya i neftepererabatyvayushchaya promyshlennost' (Radioactive Isotopes and Nuclear Radiations in the National Economy of the USSR; Transactions of the Symposium in 4 Volumes. v. 1: General Problems in the Utilization of Isotopes; Instruments With Sources of Radioactive Radiation; Radiation Chemistry; the Chemical and Petroleum-Refining Industry) Moscow, Gostoptekhizdat, 1961. 340 p. 4,140 copies printed.

Sponsoring Agency: Gosudarstvennyy nauchno-tekhnicheskyy komitet Soveta Ministrov SSSR, and Gosudarstvennyy komitet Soveta Ministrov SSSR po ispol'sovaniyu atomnoy energii.

Ed. (Title page): N.A. Petrov, L.I. Petrenko and P.S. Savitskiy; Eds. of this Vol.: L.I. Petrenko, P.S. Savitskiy, V.I. Sinitsin, Ya. M. Kolotyrkin, N.P. Syrkus and R.F. Roum; Executive Eds.: Ye. S. Levina and B. F. Titkaya; Tech. Ed.: E.A. Mukhina.

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Radioactive Isotopes (Cont.)

801/5486

PURPOSE: The book is intended for technical personnel concerned with problems of application of radioactive isotopes and nuclear radiation in all branches of the Soviet economy.

COVERAGE: An All-Union Conference on problems in the introduction of radioactive isotopes and nuclear radiation into the national economy of the Soviet Union took place in Riga on 12-16 April 1960. The Conference was sponsored by: Gosudarstvennyy nauchno-tekhnicheskiy komitet Soveta Ministrov SSSR (State Scientific and Technical Committee of the Council of Ministers, USSR); Glavnoye upravleniye po ispol'zovaniyu atomnoy energii pri Sovete Ministrov SSSR (Main Administration for the Utilization of Atomic Energy of the Council of Ministers, USSR); Academy of Sciences, USSR; Gosplan USSR; Gosudarstvennyy komitet Soveta Ministrov SSSR po avtomatizatsii i mashinostroyeniyu (State Committee of the Council of Ministers, USSR, for Automation and Machine Building) and the Council of Ministers of the Latvian SSR. The transactions of this Conference are published in four volumes. Volume I contains articles on the following subjects: the general problems of the Conference topics; the state and prospects of development of radiation chemistry; and results and prospects of applying radioactive isotopes and nuclear radiation in the petroleum refining and chemical industries. Problems of designing and manufacturing instruments which contain sources of radioactive radiation and are used for checking and automation of technological processes are examined, along with problems of accident prevention in their use. No personalities are mentioned. References accompany some of the articles.

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Radioactive Isotopes (Cont.)

SOV/5486

CHEMICAL AND PETROLEUM DISTILLING INDUSTRY

- Borukhov, M. Yu., V. Ts. Ivashev, and V.F. Kleymentov.
Pickup Utilizing Radioactive Radiations for Continuous
Measurement of Small Deviations in the Concentration of
Liquid Solutions 253
- Veksler, M.A., K.S. Furman, and G.A. Mukhin. Prospects of
Introducing Radioactive Liquid Density Meters Into the Organic
Synthesis Industry 257
- Smirnov, A.N., and V.V. Utkin. Automatic Draining of Condensate
With a Float Utilizing Radioactive Radiation 263
- Rychkov, S., I.D. Berkutova, N.A. Glukhareva, A.K. Gofman,
G.A. Kuznetsova, and N.B. Smirnova. Application of the Radio-
activating Method for the Determination of Microadmixture in
Materials of Semiconductor Production 267
- Furman, K.S., and V.V. Yakunin. Experience From the Utilization
of a Radioactive Density Meter Used for Checking Successive Pumping
of Petroleum Products 274

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S/081/62/000/004/037/087
B156/B138

AUTHORS: Veksler, M. A., Furman, K. S., Mukhin, G. A.

TITLE: Prospects for the adoption of radioactive fluid density meters in the organic synthesis industry (experience of testing and introduction)

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 4, 1962, 314, abstract 4I206 (Sb. "Radioakt. izotopy i yadern. izlucheniya v nar. kh-ve SSSR. v. 1". M., Gostoptekhizdat, 1961, 257 - 262)

TEXT: The results are given of long duration tests on radioactive fluid density meters with halogen counters (НХР-1 (PZhR-1)), scintillation counters (НХР-2 (PZhR-2)) and differential high pressure ionization chambers (НХР-5 (PZhR-5)). The instruments were tested in aqueous solutions of calcium and zinc chlorides, and also in carbon tetrachloride. The tests made it possible to establish the effect of the composition of a liquid on instrument readings and the reproducibility of readings at different points on the scale. Design shortcomings were shown up and the basic error assessed. [Abstracter's note: Complete translation.]

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REZNIKOV, Matvey Isaakovich; MIROPOL'SKIY, Zakhar Lazarevich;
FURMAN, K.S., red.

[Radioisotope methods for studying internal processes in
boilers] Radioizotopnye metody issledovaniia vnutrikotlo-
vykh protsessov. Moskva, Izd-vo "Energia," 1964. 215 p.
(MIRA 18:1)

FURMAN, Kh.M.; KHOLODNOV, L.A.

Using the Ural-1 electronic computer in petrochemical recalculations.
Razved. i okh. nedr 30 no.12:45-46 D '64.

(MIRA 18:4)

1. Magnitogorskaya kompleksnaya geologorazvedochnaya partiya.

FURMAN, Kh.M.

Use of computers for making and compiling order books:
in a sheet rolling mill. Stal' 25 no.10:950-953 0 '65.
(MIRA 18:11)

SZOSTAK, Wiktor; FURMAN, Ludomira; MACIEJEWSKI, Emil

Liver cirrhosis as a cause of increased general level of proteins in the blood serum. Pol. arch. med. wewnet. 32 no.8:1037-1042 '62.

1. Z II Kliniki Chorob Wewnetrznych Studium Doskonalenia Lekarzy AM w Warszawie Kierownik: doc. dr med. E. Ruzyllo.
(BLOOD PROTEIN DISORDERS) (LIVER CIRRHOSIS)

YUGOSLAVIA/Nuclear Physics - Installation and Instruments. Methods
of Measurement and Research.

Abs Jour : Ref Zhur - Fizika, No 6, 1959, 12260

Author : Furman, L.

Inst : -

Title : Magnetic Mass Spectrometer.

Orig Pub : Repts. "J. Stefan" Inst., 1957, 4, 109-115

Abstract : Description of a magnetic mass spectrometer, intended for isotopic analysis of substances, introduced into the ion source in the form of the gas. The ions are formed in the source by electron bombardment. Electron current up to 300 microamperes. The ions are separated by their m/e ratio in a homogeneous sector (120°) magnetic field; the radius of curvature of the trajectory of the ions is 150 mm. The mass spectrum can be scanned by changing both the magnetic field and the ion energy. In the latter case rapid scanning is possible and up to 100 lines can be

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